TEAC® AG-6500

AM-FM STEREO RECEIVER
SERVICE MANUAL

TEAC CORPORATION

SALES OFFICE: SHINJUKU BUILDING
1-8-1, NISHI-SHINJUKU, SHINJUKU, TOKYO

TEAC HONGKONG LIMITED
MAIN OFFICE: ROOM NO. 1105
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HONG KONG

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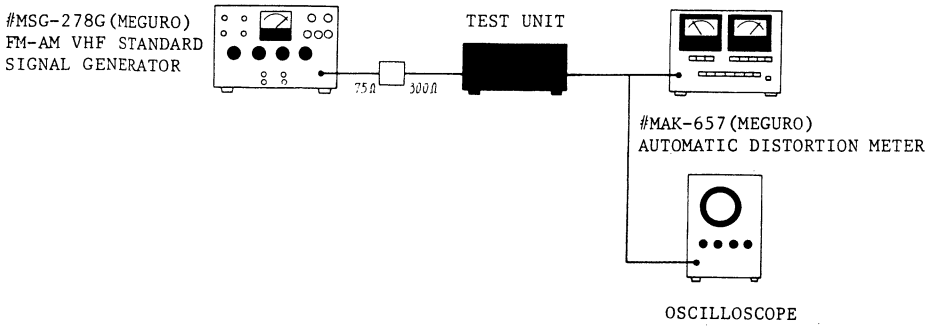
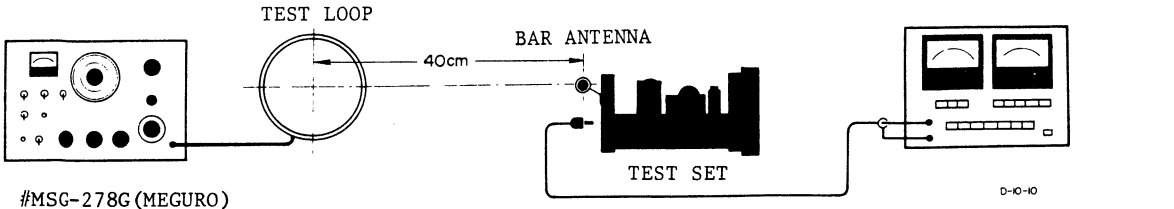
ALIGNMENT PROCEDURE

FM ALIGNMENT PROCEDURE -AG 6500-



STEP	TEST SIGNAL	APPLY TO	CHECK POINT	DIAL POINTER	ADJUST	LEVEL METER READING
1. Tracking Alignment	Set FM-SSG freq. to 90 MHz, 10∿30 dB output, 75kHz deviation with 1 kHz mod.	ANTENNA FM 300Ω terminal	RECORD jacks any channel	90MHz	L-104 (local osc) L-101∿103	maximum
	Set FM-SSG freq. to 106MHz, 10∿30 dB output, 75kHz deviation with 1 kHz mod.	ANTENNA FM 300Ω terminal	RECORD jacks any channel	106mHz	TC-104 (local osc) TC-101∿103 (RF)	maximum
2. Repeat above step 1 and step 2 until dial pointer is on frequency, adjust L-105 (top & bottom) for maximum reading on level meter and minimum distortion at output.						
3. Discriminator Adjustment	Set FM-SSG freq. to 98 MHz, 60 dB output, 75 kHz deviation with 1 kHz mod.	ANTENNA FM 300Ω terminal	RECORD jacks any channel	98MHz	T-201(FM DET) top & bottom. Preset VR-201 at mid position and adjust top core of T-201 so the needle is in the center of the tuning meter when FM-SSG output is reduced to zero(no signal). After top of T-201 is adjusted reset FM-SSG to 98 MHz, 60 dB output, 75 kHz deviation. Adjust bottom core of T-201 for minimum distortion.	
4. IF Transformer Adjustment	Set FM-SSG freq. to 98 MHz, 20∿30 dB output, with no mod.	ANTENNA FM 300Ω terminal	Connect DC VTVM to terminal No.11 on IF PC board	98MHz	T-202	maximum
5. Muting Adjustment	Set FM-SSG freq. to 98 MHz, 25 dB output, 75 kHz deviation with 1 kHz mod.	ANTENNA FM 300Ω terminal	RECORD jacks any channel	98MHz	VR-203	MUTING circuit should cease operation when FM-SSG output is reduced below 25 dB.
6. INPUT Meter Adjustment	Set FM-SSG freq. to 98 MHz, 60 dB output, 75 kHz deviation with 1 kHz mod.	ANTENNA FM 300Ω terminal	Observe INPUT meter	98MHz	VR-731	INPUT meter full scale.

AM ALIGNMENT PROCEDURE



#MSG-278G(MEGURO)
FM-AM VHF STANDARD
SIGNAL GENERATOR

AM ALIGNMENT

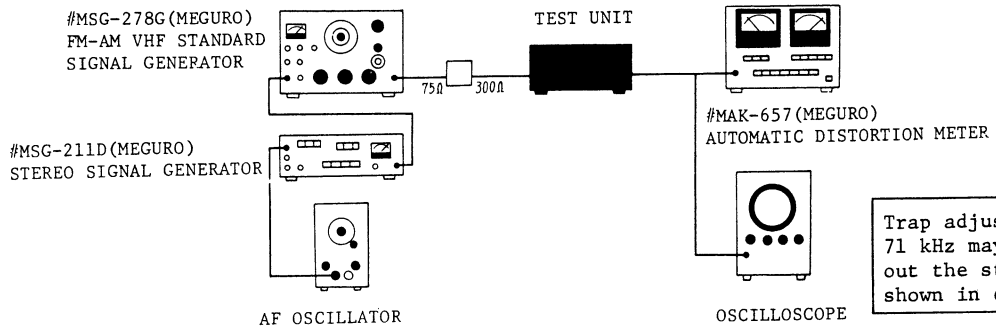
#MAK-657(MEGURO)
AUTOMATIC DISTORTION METER

NOTE

Spacing between SSG loop antenna and receiver bar antenna should be 40 cm. Meter reading at output should be 16 dB less than that of the SSG. For instance, an SSG output of 100 dB should produce a meter reading of 84 dB at the receiver.

	STEP	TEST SIGNAL	APPLY TO	CHECK POINT	DIAL POINTER	ADJUST	LEVEL METER READING
1.	AM IF Alignment	Set AM-SSG freq. to 455 kHz, max. output, 30% modulation with 400 Hz.		RECORD jack either chan.	600kHz	T-401∿403 (Top & bottom)	maximum
2.	Tracking Alignment	Set AM-SSG freq. to 600kHz, 70∿90 dB output, 30% modulation with 400Hz.	Bar antenna (See figure)	RECORD jack either chan.	600kHz	L-401∿402 (Bar ant.)	maximum
3.	Tracking Alignment	Set AM-SSG freq. to 1400 kHz, 70∿ 90dB output, 30% modulation with 400Hz.	Bar antenna	RECORD jack either chan.	1400kHz	TC-401∿403	maximum
4.	Repeat above steps until tuning dial pointer indicates at proper frequency and output is maximum.						
5.	INPUT Meter Calibration	Set AM-SSG freq. to 1000 Hz, 74dB output, 30% modulation with 400 Hz.	Bar antenna	observed INPUT meter	1000kHz	VR-402	INPUT meter should read 1/2 position.
6.	Adjust AF Output Level	Set AM-SSG freq. to 1000kHz, 74dB output, 30% modulation with 400 Hz.	Bar antenna		1000kHz	VR-401	0.3V

FM STEREO (MPX) ADJUSTMENT



NOTE

Trap adjustments for 67 kHz and 71 kHz may be accomplished without the stereo signal oscillator shown in chart #2.

STEP	TEST SIGNAL	APPLY TO	CHECK POINT	DIAL POINTER	ADJUST	LEVEL METER READING
1. 71, 67kHz trap coil Adjustment	Set FM-SSG freq. to 98 MHz, 60 dB output 75kHz deviation, and AF oscillator set for 67 kHz or 71 kHz to the external modulation input of FM-SSG.	ANTENNA FM 300Ω terminal	RECORD jacks any channel	98MHz	L-301 (67kHz) L-302 (71kHz)	minimum
2. 19kHz coil Adjustment	Set FM-SSG freq. to 98 MHz, 60dB output, with composite MPX signal 1 kHz on left channel.	ANTENNA FM 300Ω terminal	RECORD jacks left channel	98MHz 98MHz	T-301 T-302	maximum
3. 38kHz coil Adjustment	Set FM-SSG freq. to 98 MHz, 60dB output, with composite MPX signal 1 kHz on left channel.	ANTENNA FM 300Ω terminal	RECORD jacks left channel	98MHz	T-303	maximum
4. Multiplex Alignment	Set FM-SSG freq. to 98 MHz, 60dB output, with composite MPX signal 1 kHz on left channel.	ANTENNA FM 300Ω terminal	RECORD jacks left channel	98MHz	T-303 (T-301) (T-302)	minimum distortion
5. Separation Adjustment	Set FM-SSG freq. to 98 MHz, 60dB output, with composite MPX signal 1 kHz on left or right channel.	ANTENNA FM 300Ω terminal	RECORD jacks right or left channel	98MHz	VR-001	maximum separation
6. Stereo Auto Adjustment	Set FM-SSG freq. to 98 MHz, 20dB output, with composite MPX signal 1 kHz.	ANTENNA FM 300Ω terminal	RECORD jacks any channel	98MHz	VR-204	Stereo indicator lamp should light when FM-SSG output is at 20 dB or higher.

CONTINUED

TUNER SECTION

FM TUNER

Receiving Frequency:	88∿108MHz
Sensitivity:	2.5μV (IHF)
Capture Ratio:	Below 2.0dB
Image Rejection:	Better than 85dB
IF Rejection:	Better than 95dB
Selectivity:	Better than 60dB
Spurious Radiation:	Meets or exceeds FCC requirements
Signal to Noise Ratio:	Better than 65dB
Harmonic Distortion:	Below 0.7%
FM Stereo Separation:	Better than 37dB
Antenna Input Impedance:	300Ω balanced, 75Ω unbalanced

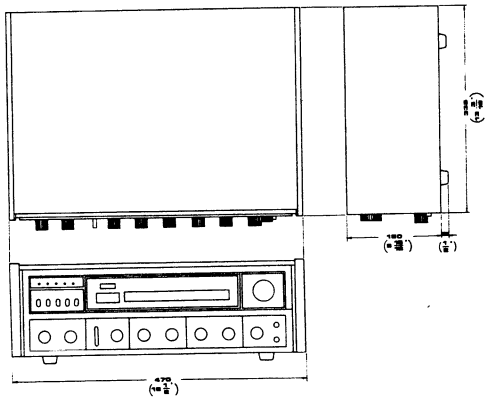
AM TUNER

Receiving Frequency:	535∿1,605kHz
Selectivity:	200μV/m (IHF)
Image Rejection:	Better than 60dB
IF Rejection:	Better than 60dB
Selectivity:	Better than 27dB
Power Requirements:	100/117/220/240 V AC, 50/60Hz
Power Consumption:	35W at no signal, 220W at rated power
AC Outlet:	Switched 200W, Unswitched 200W.
Dimensions:	6-5/16"(H)×18-1/2"(W)×15-3/4"(D) 160(H)×470(W)×400(D)mm
Weight:	31 lbs (14kg) net

STANDARD ACCESSORIES

Dipole antenna, Fuse, Pinplug, Pilot lamp, Hexwrench

Features and Specifications are subject to change without notice.



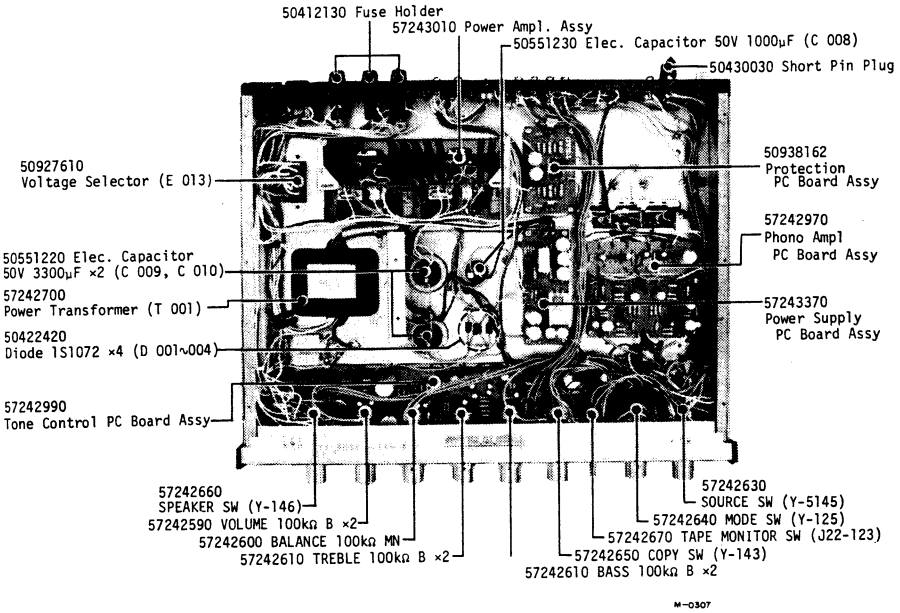
DIMENSIONS

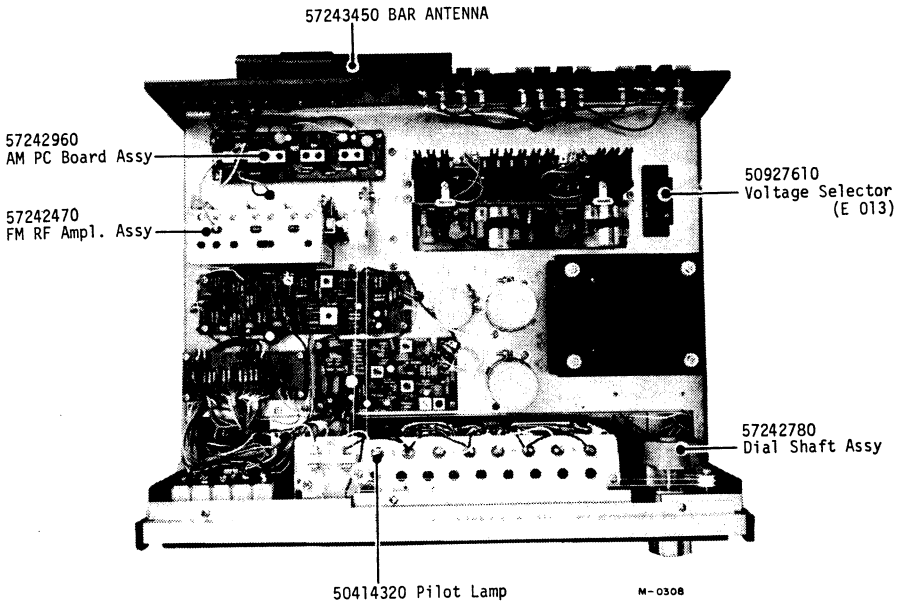
SERVICE DATA

AMPLIFIER SECTION

Rated Power:	80W (both channel operated THD 0.5% 8Ω loaded) 50W/50W (each channel operated THD 0.5% 8Ω loaded)
Harmonic Distortion:	Below 0.5%
Power Bandwidth:	10∿40,000Hz -3dB
Output Load Impedance:	4∿16Ω
Damping Factor:	80 at 8Ω
Frequency Response	
Power ampl. input:	5∿100,000Hz $^{+0}_{-1}$dB
AUX input:	20∿20,000Hz±1dB
Inputs	
Phono:	2mV
AUX:	150mV
Tape deck play:	150mV
Power ampl. input:	500mV at rated power
Outputs	
Record out:	150mV
Record out (DIN):	30mV
Preampl. out:	500mV at rated input
Signal to Noise Ratio	
Phono input:	65dB
AUX input:	75dB
Hum and Noise:	1mV min.
Channel Separation:	55dB
Tone Control:	±10dB at 100Hz & 10,000Hz
Loudness Control:	±8dB at 100Hz, ±4dB at 10,000Hz
Filter	
Low cut:	50Hz, -6dB (6dB/oct)
High cut:	10,000Hz, -6dB (6dB/oct)

COMPONENTS LOCATION



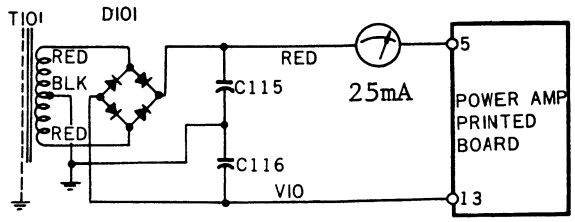


POWER AMPLIFIER

CURRENT ADJUSTING

The following procedure must be carried out on each channel with the speaker terminals open, and with no signal applied to the input. A 100 mA or higher meter is inserted between the power amplifier PC board and DC power supply line, and the trimmer resistor (VR601/602) on the PC board adjusted to obtain a 25 mA reading. First set the trimmer fully counterclockwise and adjust until the meter indicates 25 mA.
After adjusting one channel, turn off the AC power, connect the meter to other channel, apply the AC power and adjust as above.
Special attention is required as follows.

1. Remove AC power to the amplifier before connecting or removing the meter from the circuit. Failure to do so may result in damage to transistors.
2. Make small adjustments to the trimmer resistor, do not move in large increments.



POWER AMPLIFIER REPAIRS

In case of power amplifier failure, a random voltage will appear at the apeaker terminals. Acceptable voltage range at the speaker terminals is 0 plus or minus 100mV. If voltage exceeds this limit the DC balance must be restored to normal. Transistor failure is commonly the cause of unbalance, check or replace the transistors in the order shown below until the DC unbalance voltage is restored to limits. Perform these checks with no load connected to the speaker terminals. After DC balance is restored the idle current must be adjusted.

1. Q-601·603 or Q-602·604
   If a random voltage at the speaker terminals exceeds the permissible range(0 to ±100mV) for either channel, transistors Q-601·603 or Q-602·604 must be changed. These transistors must be replaced with matched pairs of transistors having the same hFE value.
2. Q-605 or Q-606
3. Q-609 or Q-610
4. If after performing steps 1, 2 and 3 the voltage at speaker terminals is still excessive, replace all remaining transistors at the same time.
5. If speaker fuse blows, the most common causes are speaker leads shorted or DC voltage imbalance in power amplifier stages. Check speaker leads thoroughly before performing the above procedures.
6. Low output and increased distortion when volume is increased may be caused by thyristor (D-751/752) failure in the electronic protective circuit. In this case, setting volume control to maximum will cause speaker fuse to blow.

TROUBLE SHOOTING

IMPORTANT

Make certain that the following points have been satisfied before commencing troubleshooting operations.

1. The equipment is being properly operated in accordance with the information provided in the operation manual.
2. The equipment has been properly adjusted for maximum performance. Poor adjustment may result in failure to produce a precise stereo effect.
3. All connections are correct and secure.
4. There is no undue interference from other audio equipment, and the antenna has been properly connected or installed.

Poor FM sensitivity Low INPUT meter indication	When the antenna terminal voltage is approx. 25dB∿30dB (0dB=1μV) the normal INPUT meter deflection will be about mid scale. Low sensitivity may be caused by faulty soldering of antenna terminal or a malfunction of the IF circuitry transistors Q-201∿Q-203 or FM RF peripheral circuitry.
Poor FM sensitivity (Normal INPUT meter indication)	Q-208, IC(TA-7061AP) or IF associated circuitry is malfunctioning. Replace IC or repair associated circuitry.
No output (INPUT and TUNING meter indications are normal)	Defective Q-301 in multiplex circuit or muting circuit. Q-501a,b or Q-502a,b in phono ampl. circuit and Q-781,782 or 783 in muting circuit.
High sound range is abnormal (FM)	De-emphasis circuit is improperly set for receiving frequency of the area. De-emphasis characteristic is 50μsec for Japan and Europe, 75μsec for USA. Set S-005 de-emphasis switch to proper position.
Poor AM sensitivity	Damaged or faulty Q-401(2SK19-BL).
Loud hum or buzz in AM reception	May be caused by strong AM field intensity, flourescent lamps, or associated audio equipment.

No sound, AM or FM (Malfunction of tuner power supply circuit)	If a short circuit of the B+ line exists Q-801 will be damaged. First locate the short circuit and then replace Q-801(2SC 1060) in the power supply circuit.
FM - muting switch ON - no sound	Check adjustment of VR-203 (muting level adjustment) on the IF printed circuit board.
Tuner functions but no sound emerges from speakers. Fuse F-002 and/or F-003 blown. (power amplifier malfunction)	1. Speaker protective fuse F-002/003 blows. Cause - Shorted speaker or speaker wiring. Failure of output stage protective circuit. - Check thyristor D-751/752 in output stage protective circuit. If thyristor fails, loud volume settings will cause F-002/003 to blow. Corrective action - Check speaker and wiring for short circuits. - Check operation of output stage protective circuit. Replace fuse with new fuse of same size (3A). 2. Power transistor failure Q-613 through Q-616 Power Transistor Replacement. Remove the defective transistor. Check the DC voltage at terminal 3 or 4 of the power amplifier PC board, it should be within the range of ±100mV, if the voltage at the applicable terminal greatly exceeds the range of ±100mV the problem is in Q-607 - Q-610 stage. Check and repair proceeding stages before replacing power transistor.
Heat sinkd become excessively hot with no signal input.	Check connections and settings of idle current adjustment resistors VR-601 and VR-602. Repair connections if defective and then adjust VR-601 and VR-602 so that current flow at terminals 21 and 22 of the power amplifier PC board becomes 25 mA or less. (See idle current adjustment.)
Amplifier will not turn on	F-001 blown, defective AC cord. Defective power switch etc. F-001 blown would tend to indicate a power supply defect. Check and repair power supply circuitry before replacing fuse.

AG-6500

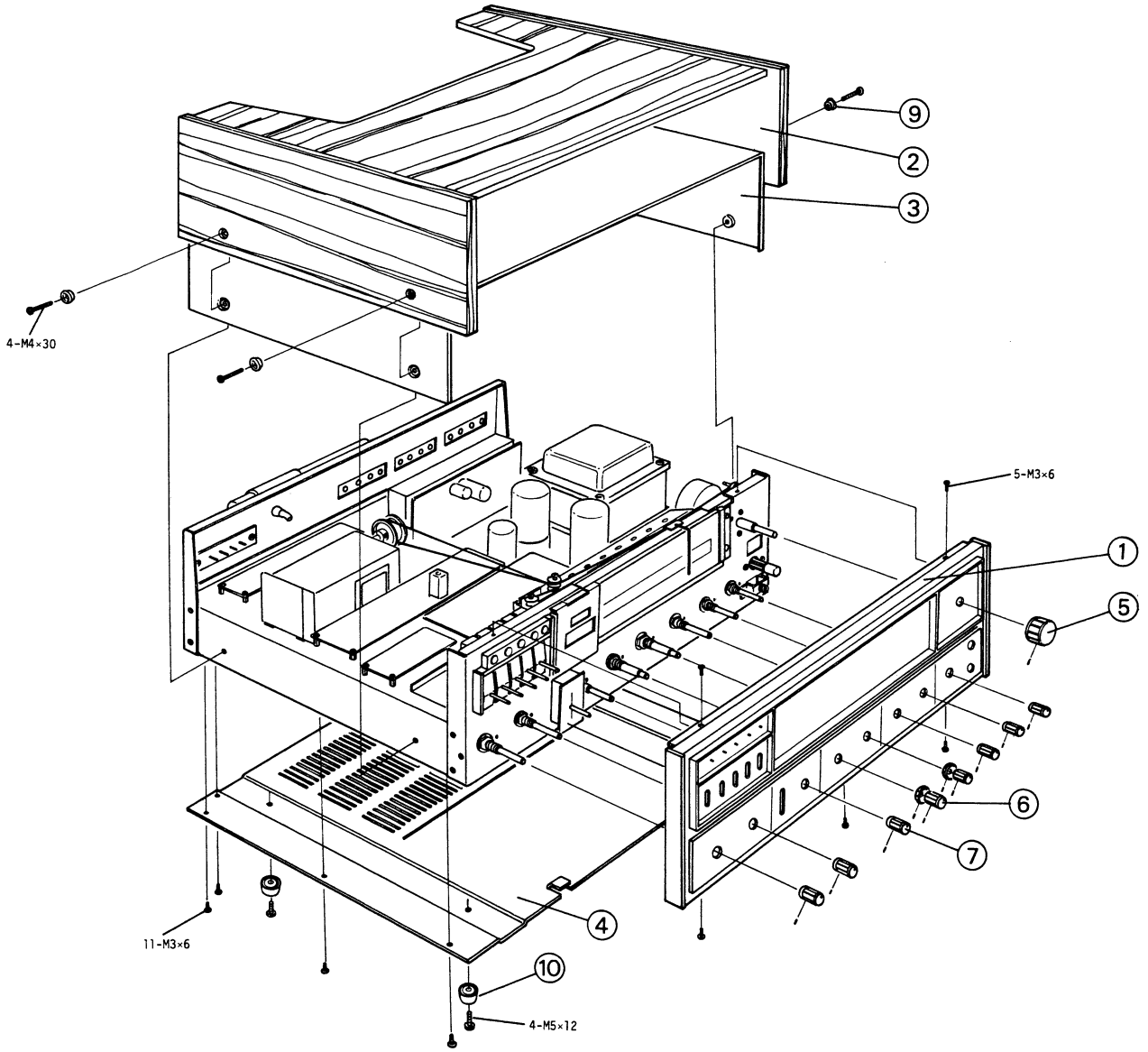
SCHEMATIC DIAGRAM

PRINTED CIRCUIT BOARD AND PARTS LIST

EXPLODED VIEW AND PARTS LIST

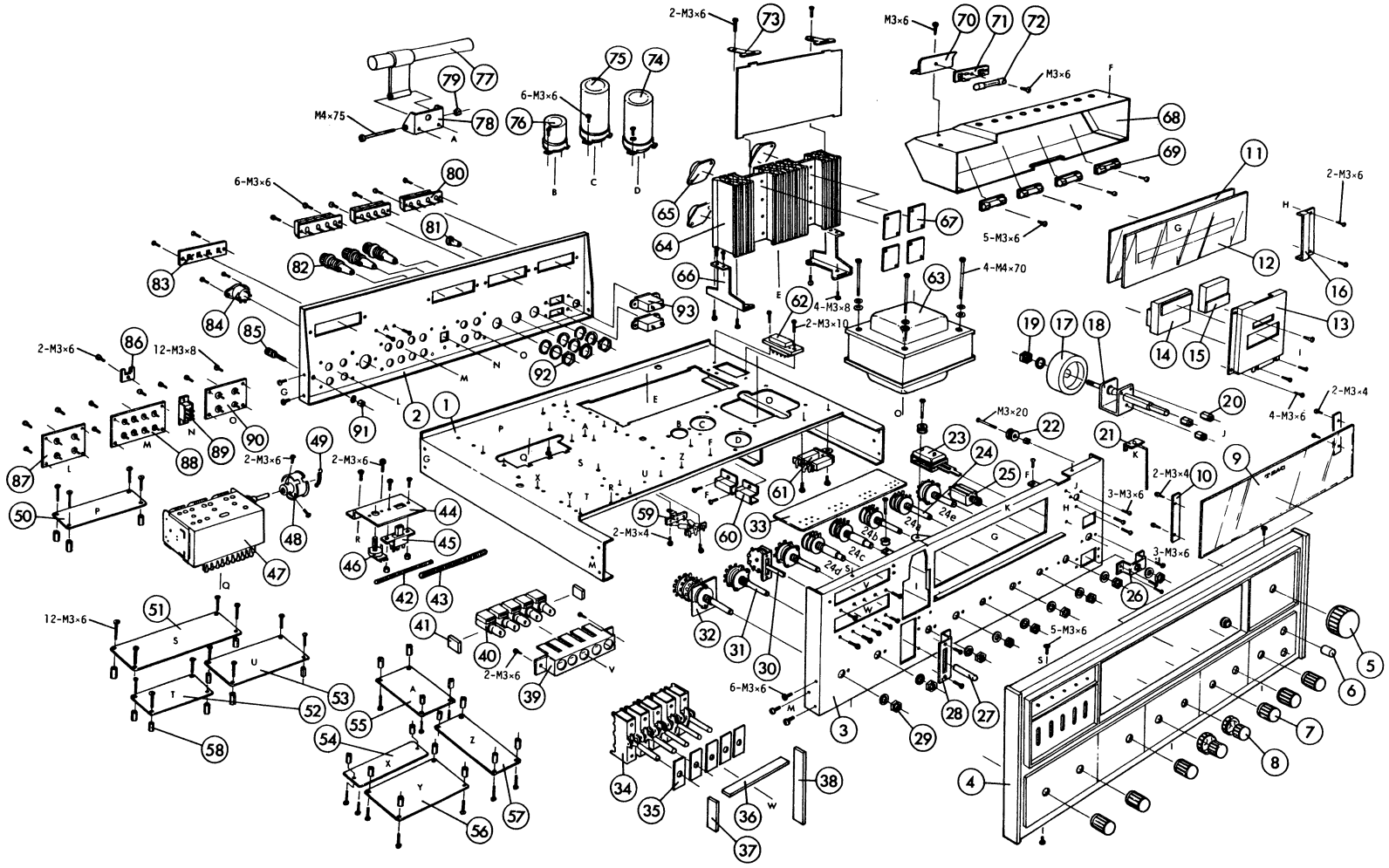
EXPLODED VIEW
AG-6500

TRIM PARTS



TRIM PARTS

REF. NO.	TEAC PARTS NO.	DESCRIPTION
1- 1	57243030	Front Panel Assy
1- 2	57242890	Wooden Cabinet
1- 3	57242880	Bonnet
1- 4	57242900	Bottom Plate
1- 5	57243260	Knob D
1- 6	57243240	Knob B
1- 7	57243230	Knob A
1- 9	50276930	Nylon Washer
1-10	50283830	Mount Foot


2-M3×6
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M3×6
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M3×6
F
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69
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2-M3×6
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G
5-M3×6
67
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64
66
63
4-M4×70
62
4-M3×8
2-M3×10
E
93
92
80
6-M3×6
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84
85
M4×75
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A
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6-M3×6
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C
D
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I
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2-M3×4
4-M3×6
2-M3×6
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12-M3×8
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M3×20
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2-M3×4
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3-M3×6
2-M3×4
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24a
24b
24c
24d
24e
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2-M3×6
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2-M3×6
12-M3×6
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6-M3×6
5-M3×6
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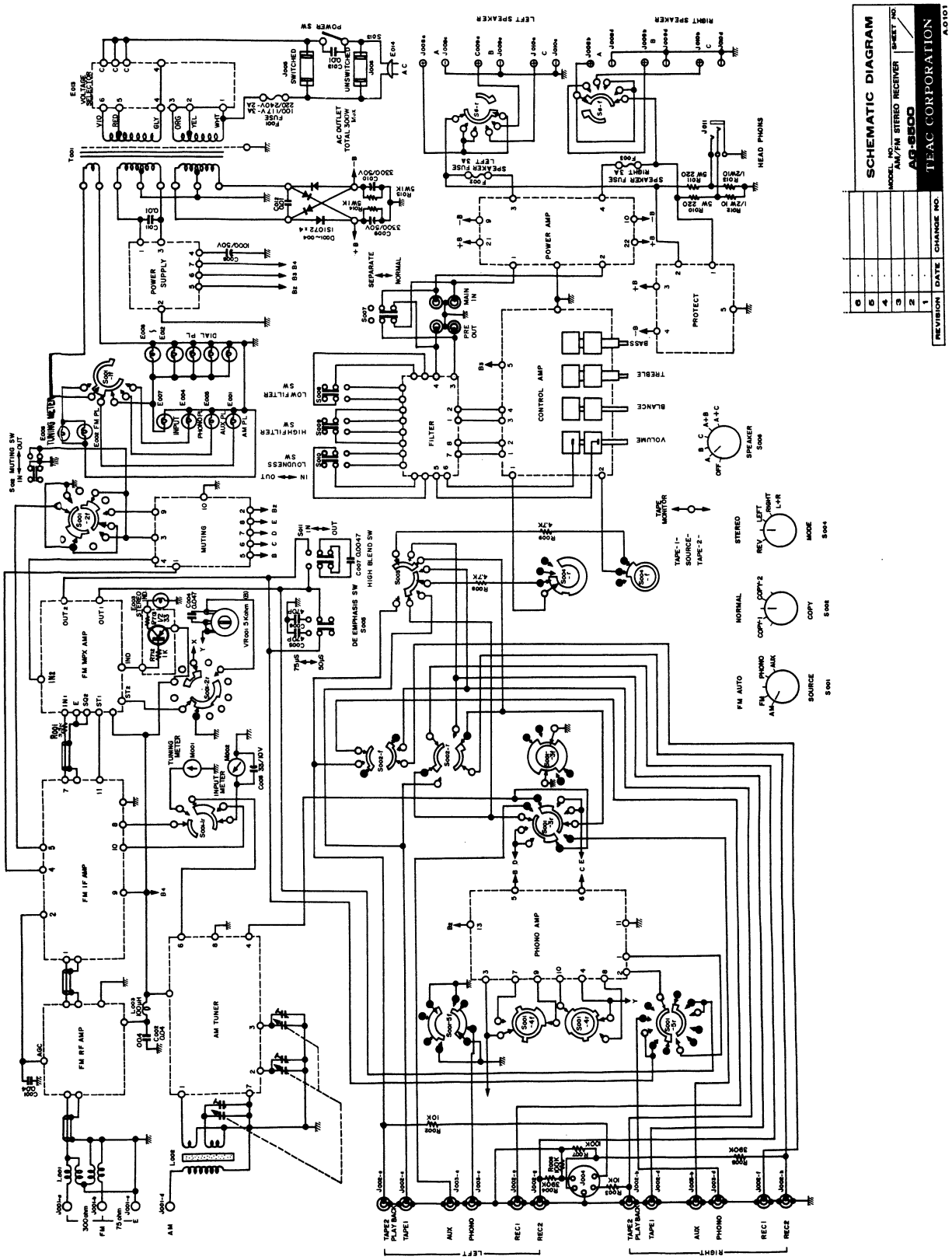
8

MAIN CHASSIS

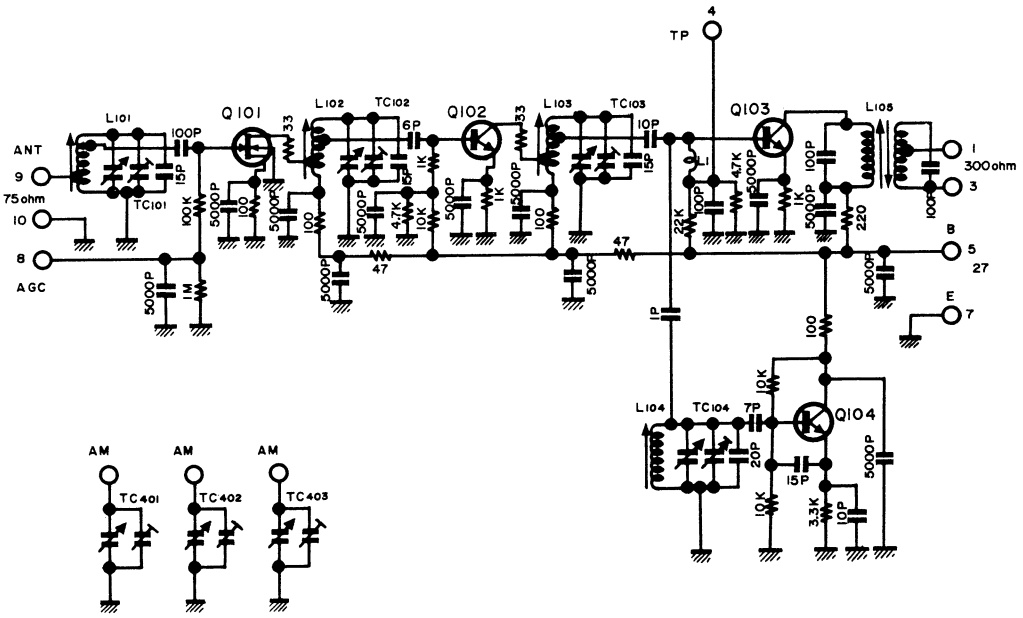
REF. NO.	TEAC PARTS NO.	DESCRIPTION
2- 1	57242860	Main Chassis
2- 2	57243330	Back Panel
2- 3	57242720	Front Chassis
2- 4	57243030	Front Panel Assy
2- 5	57243260	Knob D
2- 6	57243290	Power Switch Knob
2- 7	57243230	Knob A
2- 8	57243240	Knob B
2- 9	57243140	Front Glass
2-10	57243130	Front Glass Retainer Plate
2-11	50936750	Dial Scale Rear Plate
2-12	57242760	Dial Scale Front Plate
2-13	57242810	Meter Mount Plate
2-14	50936720	Input Meter
2-15	57242480	Tuning Meter
2-16	50936780	Holder Dial Scale Plate
2-17	50932600	Flywheel
2-18	50937440	Dial Shaft Bracket
2-19		Flywheel Mount Nut
2-20	57242800	Stud
2-21	57242850	Dial Pointer
2-22	50929130	Pulley
2-23	50443430	Power Switch
2-24	57242590	Volume Control 100k-B ×2
24a	57242600	Balance 100k-MN
24b	57242610	Treble 100k-B
24c	57242610	Bass 100k-B
24d	57242650	Copy SW Y-143
24e	57242660	Speaker SW Y-146
2-25	50432440	Phone Jack 3P
2-26	57242840	Phone Jack Bracket
2-27	57243280	Lever SW Knob B
2-28	57243160	Lever SW Bracket
2-29		Nut M4
2-30	57242670	Tape Monitor Switch J22-123
2-31	57242640	Mode Switch Y-125
2-32	57242630	Source Switch Y-5145
2-33	57242990	Tone Control Base Plate Assy
2-34	50936690	Lever Swtich
2-35	57243210	Tinted Plate B
2-36	57243180	Sponge B
2-37	57243170	Sponge A
2-38	57243180	Sponge B
2-39	57242830	Lamp Bracket
2-40	50415130	Lamp Socket
2-41	57242820	Sponge C
2-42	50929400	Shield Pipe
2-43	57243360	Shield Pipe B
2-44	57242870	Volume Control Bracket
2-45	57242680	Slide Switch
2-46	57242620	Volume 5K-B
2-47	57242470	FM RF Ampl.
2-48	50937471	Dial Drum
2-49	50928980	Spring (Small)
2-50	57242960	AM PC Board Assy
2-51	57242910	FM IF PC Board Assy
2-52	57243000	Filter PC Board Assy
2-53	57242950	FM MPX PC Board Assy

MAIN CHASSIS

REF. NO.	TEAC PARTS NO.	DESCRIPTION
2-54	57242980	Muting PC Board Assy
2-55	50938162	Protection PC Board Assy
2-56	57242970	Phono Ampl. PC Board Assy
2-57	57243370	Power Supply PC Board Assy
2-58		Spacer
2-59	50452550	Terminal Strip 1L2P
2-60	57243120	Cement Resistor Bracket
2-61	50520310	Cement Resistor 220/5W
2-62	50927610	Voltage Selector
2-63	57242700	Power Transformer
2-64	50928680	Heat Sink
2-65	50424540	2SD218M Power Transistor
2-66	50938070	Heat Sink Bracket
2-67	50434720	Power Transistor Socket
2-68	57242740	Radiation Case
2-69	50414320	Tube Type Lamp
2-70	57242770	Holder Lamp
2-71	50412180	Fuse Holder 1P
2-72	50414320	Tube Type Lamp
2-73	50928320	Power Ampl. PC Board Bracket
2-74	50551220	Elec. Capacitor 3300/50VW
2-75	50551220	Elec. Capacitor 3300/50VW
2-76	50551230	Elec. Capacitor 1000/50VW
2-77	57243450	Bar Antenna
2-78	57243380	Bar Antenna Bracket
2-79		M4 Nut
2-80	50451090	Output Connector 4PD
2-81	50277580	Cord Stopper
2-82	50412130	Fuse Holder
2-83	50454060	Antenna Terminal 4P
2-84	50430010	DIN Connecter
2-85	50926120	Earth Terminal
2-86	57243400	Slide Switch Stopper
2-87	50430190	Pin Jack US4P
2-88	50430210	Pin Jack US8P
2-89	57242680	Slide Switch
2-90	50430190	Pin Jack US4P
2-91		M3 Nut
2-92		M4 Nut
2-93	50924510	AC Outlet
2-94		
2-95		
2-96		


SCHEMATIC DIAGRAM
MODEL NO. AM/FM STEREO RECEIVER
SHEET NO.
AG-6500
TEAC CORPORATION
A0101
REVISION
DATE
CHANGE NO.
POWER SW
LEFT SPEAKER
RIGHT SPEAKER
HEAD PHONS
POWER SUPPLY
POWER AMP
PROTECT
CONTROL AMP
FILTER
TREBLE
BLANCE
VOLUME
SPEAKER
TAPE MONITOR
STEREO
MODE
SOURCE
COPY
FM MPX AMP
FM IF AMP
FM RF AMP
AM TUNER
PHONO AMP
TAPE2 PLAY BACK
TAPE1
AUX
PHONO
REC1
REC2
LEFT
RIGHT

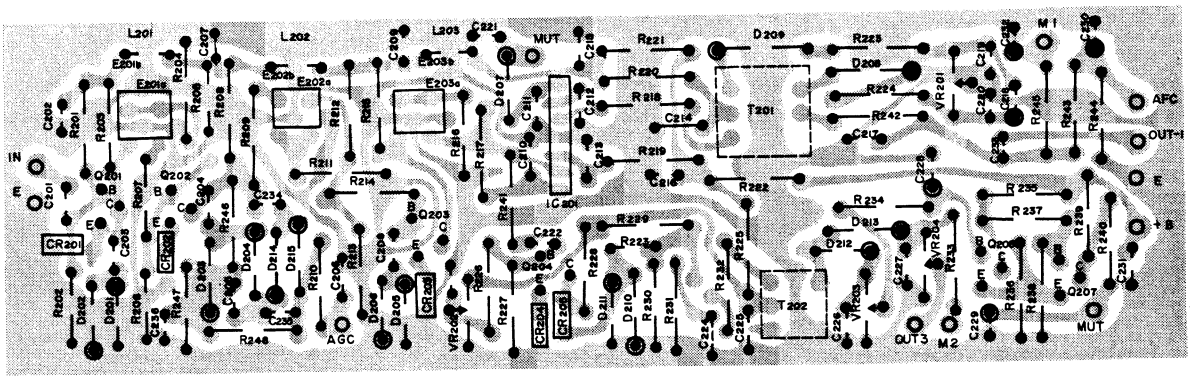
FM RF AMPLIFIER



Q101 3SK22
Q102, Q103 2SC535

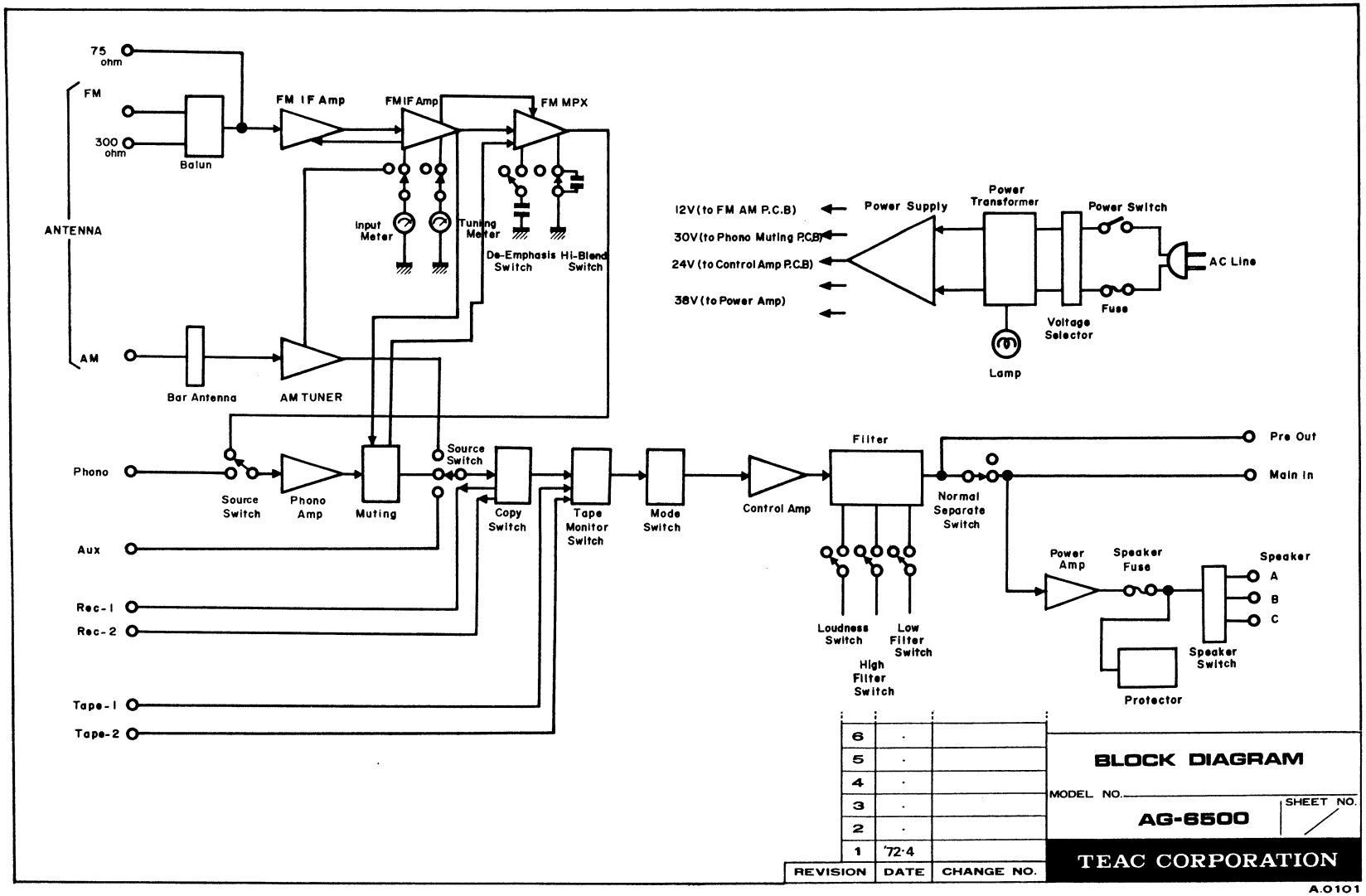
FM RF AMPLIFIER ASSEMBLY
PART NO.57242470 (FL41ZU11)

FM IF AMPLIFIER

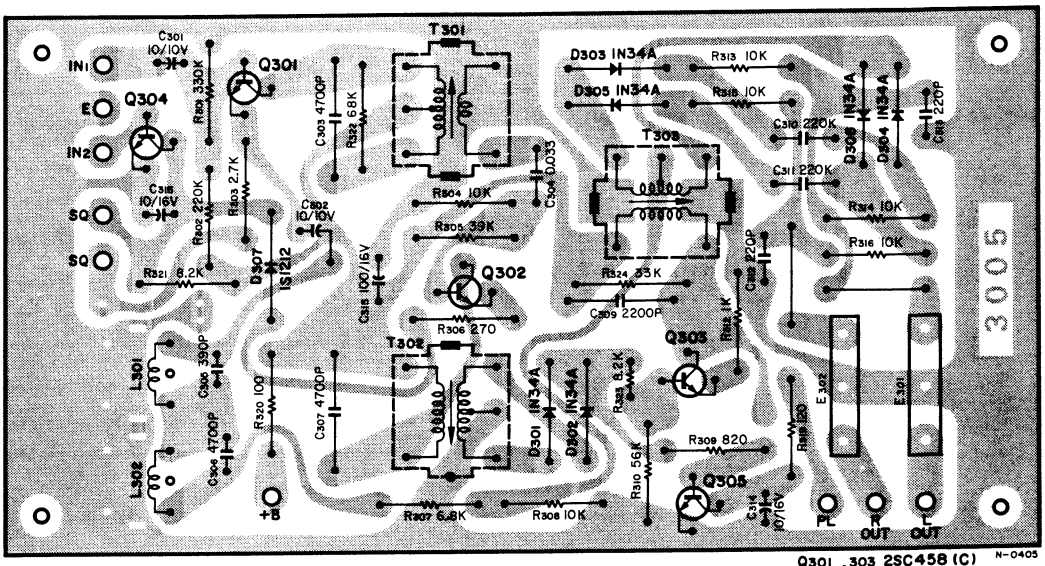


CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION
	57242910	PC Board Assy, FM IF Ampl.
		SILICON TRANSISTORS
Q201·203·204	50424480	2SC710-D
Q202·205	50424470	2SC710-C
Q206·207	50424490	2SC711-F
Q208	57242920	Integrated Circuit TA-7061AP
		DIODES
D201∿206	50422780	1S188
D208·209	50422410	1N34A
D210∿213	50422780	1S188
		CARBON RESISTORS
R201	50519170	33kΩ 1/4W 10%
R202	50518830	8.2kΩ 1/4W 10%
R203·208·215·234	50513430	1kΩ 1/4W 10%
R204·211·216	50518800	820Ω 1/4W 10%
R205·206·213·228	50513450	1.5kΩ 1/4W 10%
R207·225·231	50519630	220Ω 1/4W 10%
R209·214·218·221	50513310	120Ω 1/4W 10%
R210	50513700	100kΩ 1/4W 10%
R212·226·227	50513950	2.2kΩ 1/4W 10%
R217	50519290	330Ω 1/4W 10%
R219·220	50519280	270Ω 1/4W 10%
R222	50518740	56Ω 1/4W 10%
R223·224	50513920	680Ω 1/4W 10%
R229·239	50519440	39kΩ 1/4W 10%
R230	50519230	6.8kΩ 1/4W 10%
R232	50513300	100Ω 1/4W 10%
R235·238	50513930	22kΩ 1/4W 10%
R236	50518750	68Ω 1/4W 10%
R237·245	50513570	10kΩ 1/4W 10%
R240·241	50519630	220Ω 1/4W 10%
R242	50519270	47Ω 1/4W 10%
R246	50513100	10Ω 1/4W 10%

CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION
		TRIMMER RESISTORS
VR201·203	57242570	20kΩ B
VR202	57242560	5kΩ B
VR204	57242570	50kΩ B
C201·222·223	50542040	Ceramic 0.01μF
C202·207·224·225·231	50542070	Ceramic 0.04μF
C203·208	50542030	Ceramic 0.001μF
C204	50542010	Ceramic 10pF
C205·206·221·226·227	50542110	Ceramic 0.02μF
C209∿216	50542070	Ceramic 0.04μF
C217	50542060	Ceramic 47pF
C218	50554530	Elec. 4.7μF 25V
C219·220	50542260	Ceramic 33pF
C228·232	50554540	Elec. 1μF 50V
		MISCELLANEOUS
E201∿204	57242500	CR Unit 0.01μF + 1kΩ
E205	57243420	CR Unit 0.01μF + 1kΩ
E206∿211	50932280	Ceramic Filter, SFA10.7MC-3
L201∿203	57242490	RF Inductor, EL06-10-330M
T201	57242710	Transformer, Discriminator, 211D
T202	57242930	Transformer, FM IF, 204E


75 ohm
FM
300 ohm
Balun
FM I F Amp
FM IF Amp
FM MPX
ANTENNA
Input Meter
Tuning Meter
De-Emphasis Switch
Hi-Blend Switch
AM
Bar Antenna
AM TUNER
12V (to FM AM P.C.B)
30V (to Phono Muting P.C.B)
24V (to Control Amp P.C.B)
38V (to Power Amp)
Power Supply
Power Transformer
Power Switch
AC Line
Fuse
Voltage Selector
Lamp
Phono
Source Switch
Phono Amp
Muting
Source Switch
Copy Switch
Tape Monitor Switch
Mode Switch
Control Amp
Filter
Pre Out
Main In
Normal Separate Switch
Aux
Rec-1
Rec-2
Tape-1
Tape-2
Loudness Switch
Low Filter Switch
High Filter Switch
Power Amp
Speaker Fuse
Speaker
A
B
C
Speaker Switch
Protector
REVISION
DATE
CHANGE NO.
6
5
4
3
2
1
'72·4
BLOCK DIAGRAM
MODEL NO.
AG-6500
SHEET NO.
TEAC CORPORATION
A.0101

FM MPX AMPLIFIER



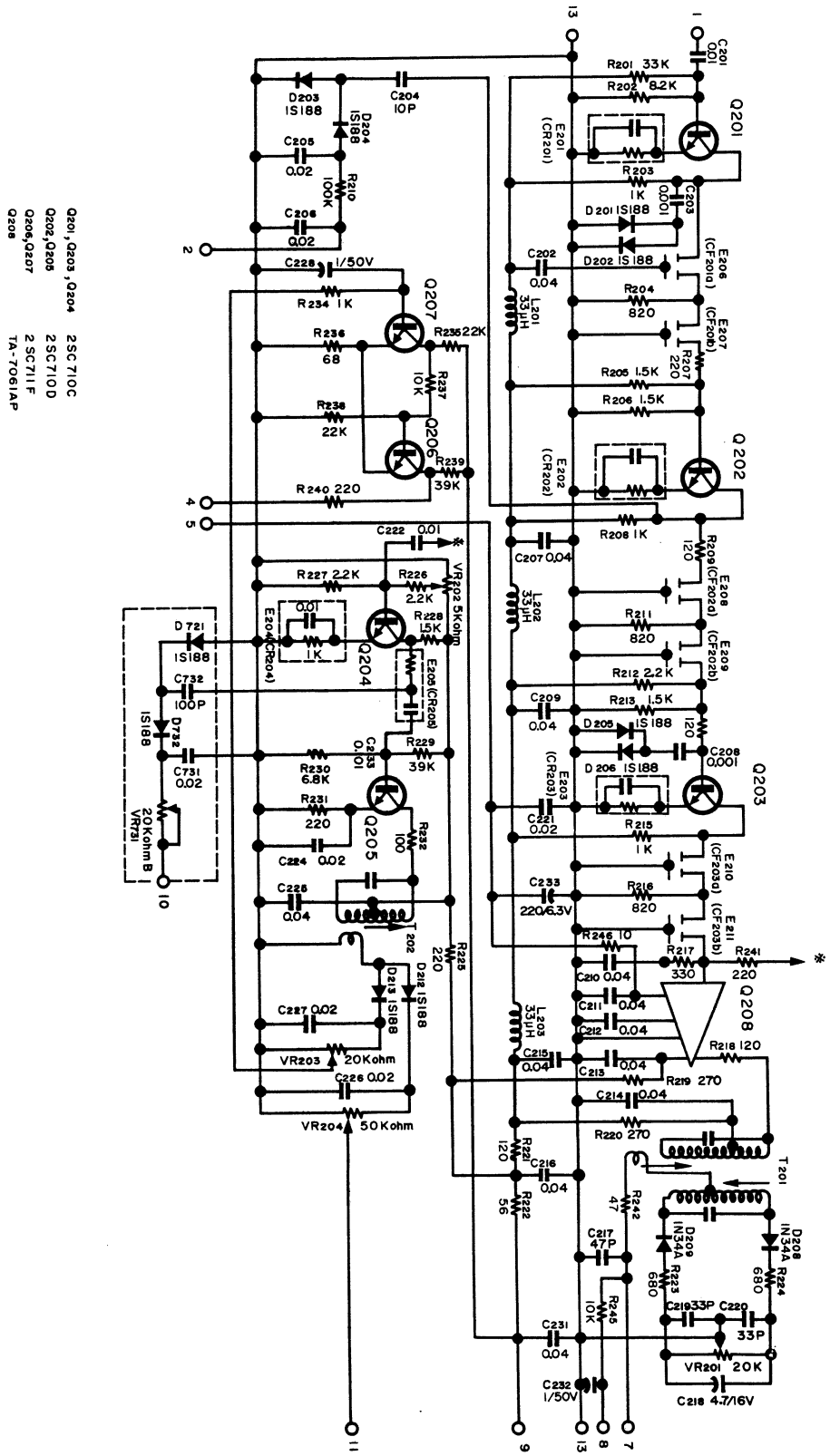
Q301 ,303 2SC458 (C)
Q302 2SC458 (B)
Q304 , 305 2SC458 (D)

CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION
	57242950	PC Board Assy, FM MPX Ampl.
	SILICON TRANSISTORS	
Q301·302	50426130	2SC537-E
Q303·304 305	50426140	2SC537-G
	DIODES	
D301	50422800	1S1212
D302∿307	50422410	1N34AYL
	COILS	
T301	57242520	MPX 311A
T302	57242510	MPX 309B
T303	57242540	MPX 305D
L301	57242530	MPX 313E
L302	57242550	MPX 312E
	CAPACITORS	
C301	50554540	Elec. 1μF 50V
C302	50554050	Elec. 10μF 16V
C303	50543450	Polyst. 4700pF 100V
C304	50548240	Mylar 0.033μF
C305	50543450	Polyst. 4700pF 100V
C306	50543910	Polyst. 0.01μF 100V
C307	50543900	Polyst. 390pF 100V
C308	50554350	Elec. 10μF 50V
C309	50554540	Elec. 1μF 50V
C310	50554050	Elec. 10μF 16V
C311	50554200	Elec. 100μF 16V
C312	50543540	Polyst. 2200pF 100V
C313·314	50543420	Mica 220pF 50V
C315·316	50543530	Mica 470pF 50V
C319·320	50543900	Polyst. 390pF 50V
C321·322	50554540	Elec. 1μF 50V
C323	50554540	Elec. 1μF 50V
C324	50554050	Elec. 10μF 16V
E301	50929610	CR Filter FP-38A
E302	50929610	CR Filter FP-38A

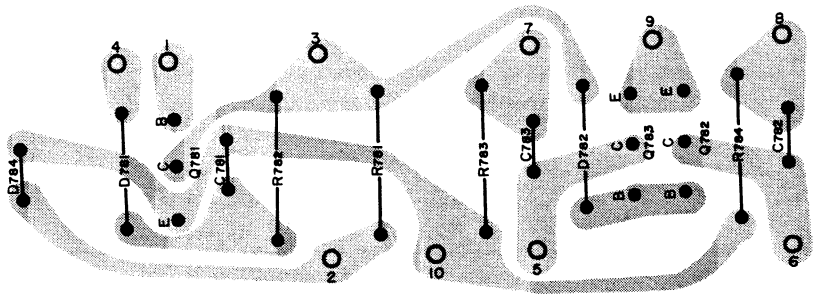
CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION
	CARBON RESISTORS	
R301	50513710	120kΩ 1/4W 10%
R302	50513700	100kΩ 1/4W 10%
R303	50518050	2.7kΩ 1/4W 10%
R304·306	50518830	8.2kΩ 1/4W 10%
R305	50513580	12kΩ 1/4W 10%
R307	50519440	3.9kΩ 1/4W 10%
R308	50519610	47Ω 1/4W 10%
R309·311	50513430	1kΩ 1/4W 10%
R310	50519290	330Ω 1/4W 10%
R312·315	50513570	10kΩ 1/4W 10%
R313	50519230	6.8kΩ 1/4W 10%
R314	50513950	2.2kΩ 1/4W 10%
R316·318	50518910	390kΩ 1/4W 10%
R317·319	50513570	10kΩ 1/4W 10%
R320·322	50518910	390kΩ 1/4W 10%
R321	50513570	10kΩ 1/4W 10%
R323·324	50519170	33kΩ 1/4W 10%
R327	50513300	100Ω 1/4W 10%

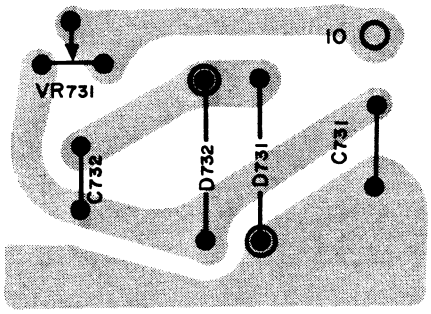
CIRCUIT
AG-6500

FM IF AMPLIFIER



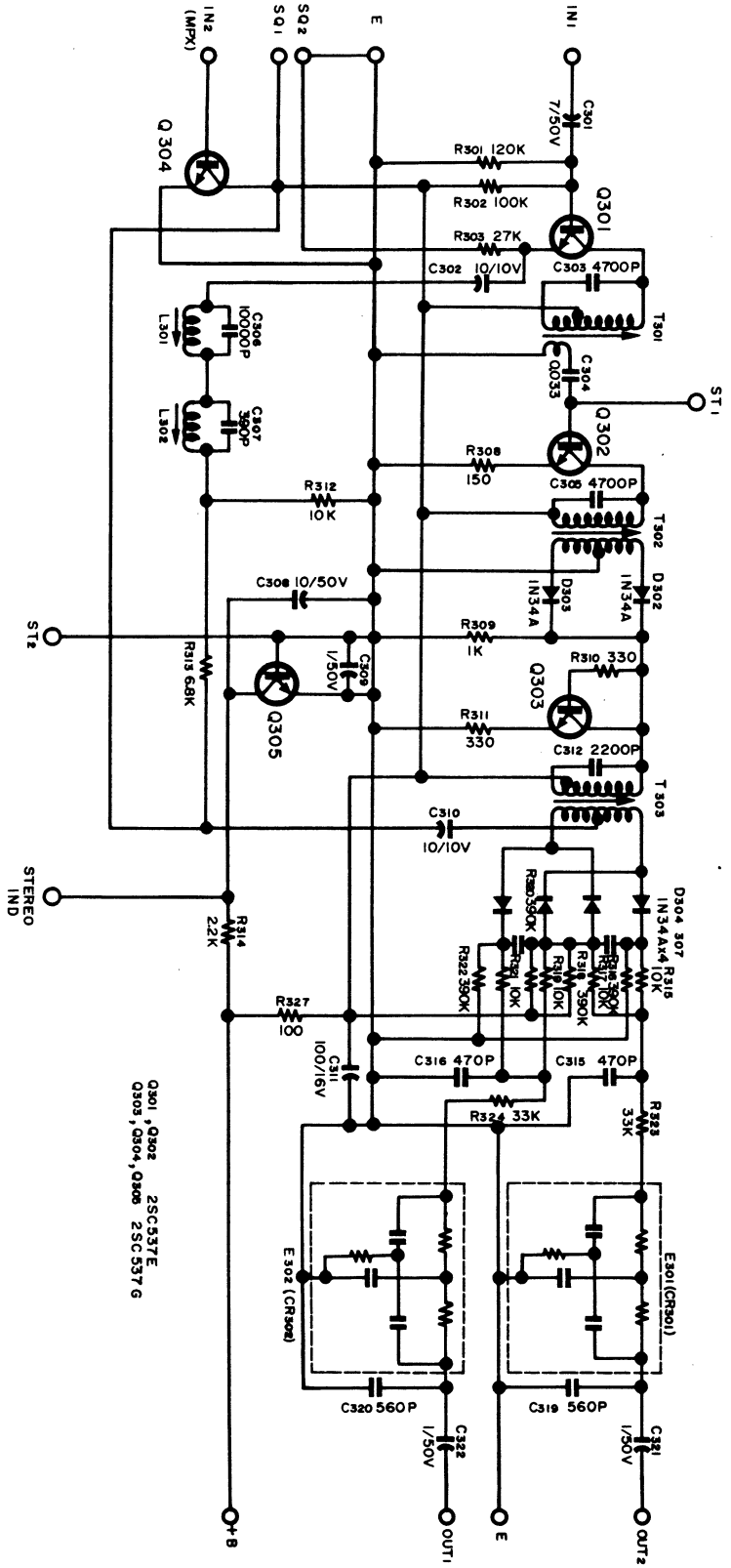
MUTING CIRCUIT & METER PC BOARD



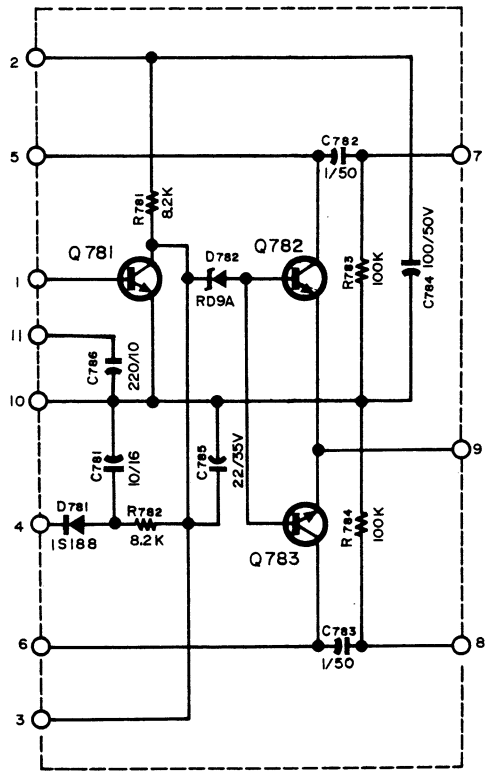


CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION
	57242940	PC Board Assy, Meter
D731/732	50422780	Diode 1S188
VR731	57242690	Trimmer Resistor 20kΩ B
C731	50542110	Capacitor, Ceramic 0.02μF 50V
C732	50542020	Capacitor, Ceramic 100pF 50V
	57240420	Pin, F3 Type

FM MPX AMPLIFIER



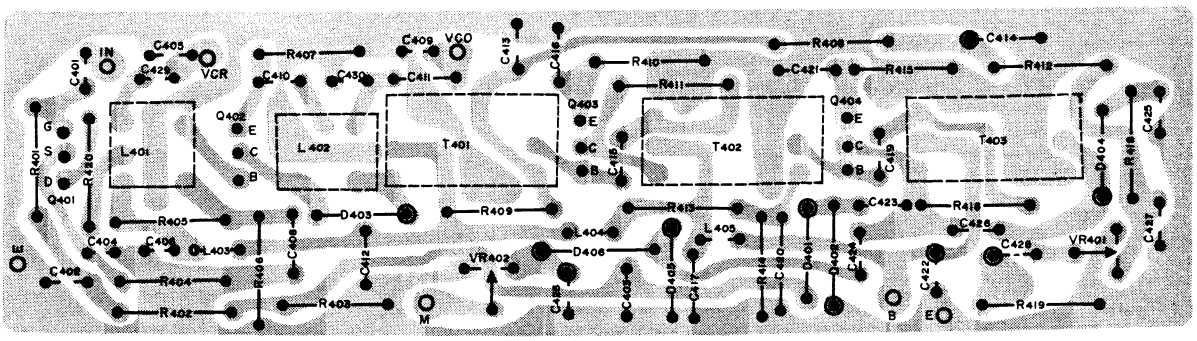
MUTING CIRCUIT



2SC871E Q501a , Q501b
2SC693FV Q502a , Q502b
2SC693FU Q781 , Q782 , Q783

CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION
	57242980	PC Board Assy, Muting Circuit
Q781	50424510	Transistor, 2SC693-FU
Q782	50424510	Transistor, 2SC693-FU
Q783	50424510	Transistor, 2SC693-FU
	57240420	Pin. F3 Type
D781	50422780	Diode 1S188
D782	50422790	Diode RD9A
R781	50518830	Resistor, Carbon 8.2kΩ 1/4W 10%
R782	50518830	Resistor, Carbon 8.2kΩ 1/4W 10%
R783	50513700	Resistor, Carbon 100kΩ 1/4W 10%
R784	50513700	Resistor, Carbon 100kΩ 1/4W 10%
C781	50554050	Capacitor, Elec. 10μF 16V
C782	50554540	Capacitor, Elec. 1μF 50V
C783	50554540	Capacitor, Elec. 1μF 50V
C784	50554070	Capacitor, Elec. 100μF 50V

AM TURNER

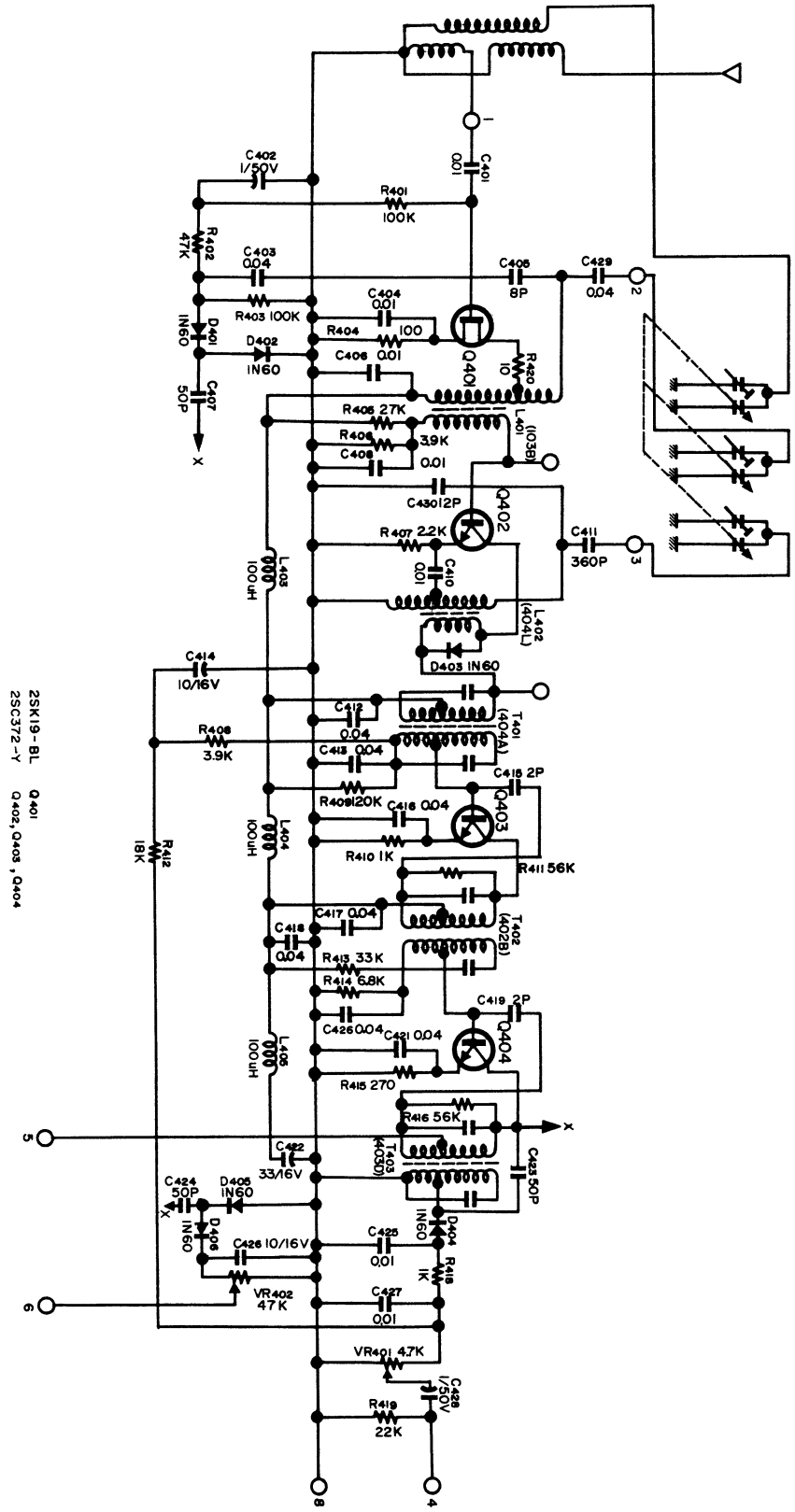


CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION
	57242960	PC Board Assy, AM Tuner
		SILICON TRANSISTORS
Q401	50423710	FET 2SK19-BL
Q402∿404	50423250	2SC372-Y
		DIODES
D401∿406	50422130	1N60
		COILS
L401	50929490	RF,103B
L402	50929500	OSC,404L
L403	50929540	RF Inductor,LTB100
L404	50929540	RF Inductor,LTB100
L405	50929540	RF Inductor,LTB100
		TRANSFORMERS
T401	50929510	AM IFT (1),484A
T402	50929520	AM IFT (2),402B
T403	50929530	AM IFT (3),403D
		CARBON RESISTORS
R401	50513700	100kΩ 1/4W 10%
R402	50513870	47kΩ 1/4W 10%
R403	50513700	100kΩ 1/4W 10%
R404	50513300	100Ω 1/4W 10%
R405	50513860	27kΩ 1/4W 10%
R406	50513940	3.9kΩ 1/4W 10%
R407	50513950	2.2kΩ 1/4W 10%
R408	50513940	3.9kΩ 1/4W 10%
R409	50513710	120kΩ 1/4W 10%
R410	50513430	1kΩ 1/4W 10%
R411	50513990	56kΩ 1/4W 10%
R412	50513890	18kΩ 1/4W 10%
R413	50519170	33kΩ 1/4W 10%
R414	50519230	6.8kΩ 1/4W 10%
R415	50519280	270Ω 1/4W 10%
R416	50513990	56kΩ 1/4W 10%
R418	50513430	1kΩ 1/4W 10%
R419	50513930	22kΩ 1/4W 10%
R420	50513100	10Ω 1/4W 10%

CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION
VR401	50533580	4.7kΩ B
VR402	50533520	47kΩ B
		TRIMMER RESISTORS
C401	50542040	Ceramic 0.01μF 50V
C402	50554540	Elec. 1μF 50V
C403	50542070	Ceramic 0.04μF 50V
C404	50542040	Ceramic 0.01μF 50V
C405	50542240	Ceramic 8pF 50V
C406	50542040	Ceramic 0.01μF 50V
C407	50542060	Ceramic 50pF 50V
C408	50542040	Ceramic 0.01μF 50V
C410	50542040	Ceramic 0.01μF 50V
C411	50549940	Mica 360pF 50V
C412	50542070	Ceramic 0.04μF 50V
C413	50542070	Ceramic 0.04μF 50V
C414	50554050	Elec. 10μF 16V
C415	50542160	Ceramic 2pF 50V
C416	50542070	Ceramic 0.04μF 50V
C417	50542070	Ceramic 0.04μF 50V
C418	50542070	Ceramic 0.04μF 50V
C419	50542160	Ceramic 2pF 50V
C420	50542070	Ceramic 0.04μF 50V
C421	50542070	Ceramic 0.04μF 50V
C422	50554260	Elec. 33μF 16V
C423	50542060	Ceramic 50pF 50V
C424	50542020	Ceramic 100pF 50V
C425	50542040	Ceramic 0.01μF 50V
C426	50554710	Elec. 22μF 50V
C427	50542040	Ceramic 0.01μF 50V
C428	50554540	Elec. 1μF 50V
C429	50542070	Ceramic 0.04μF 50V
C430	50542250	Ceramic 12pF 50V
	57240420	Pin, F3 Type

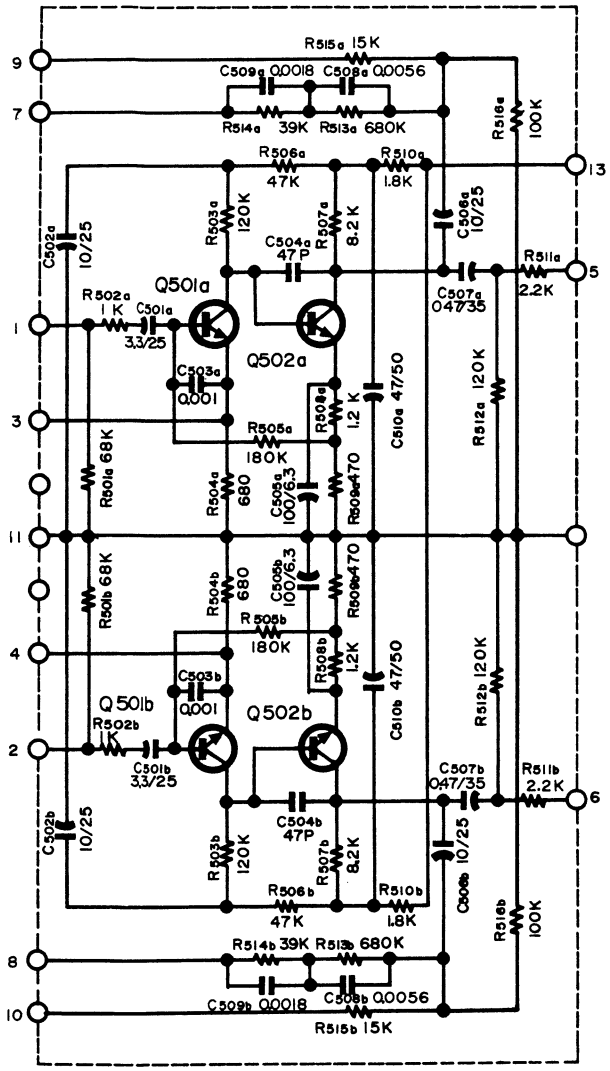
CIRCUIT
AG-6500

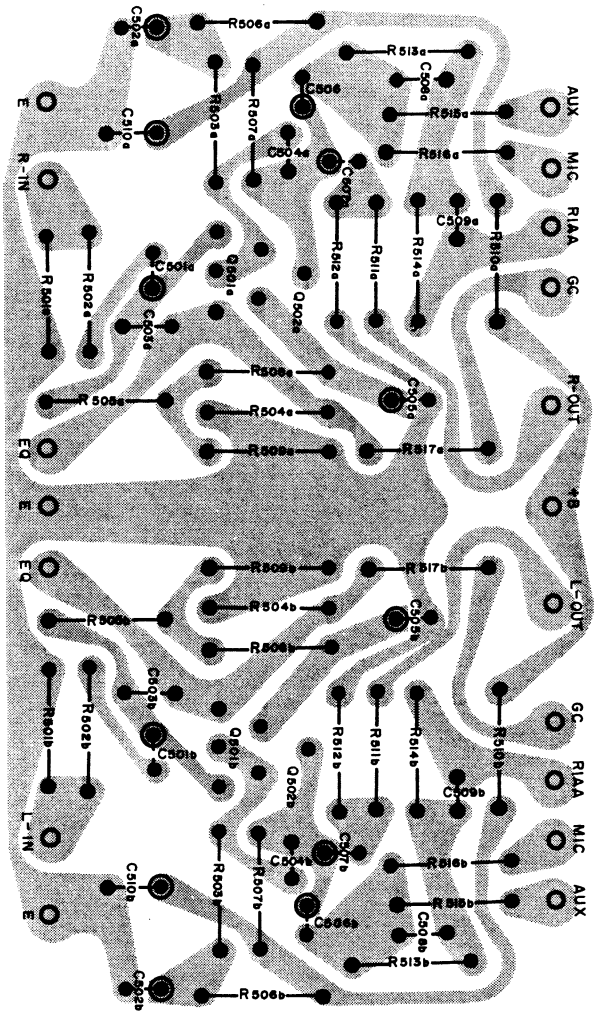
AM TURNER



CIRCUIT & PC BOARD
AG-6500

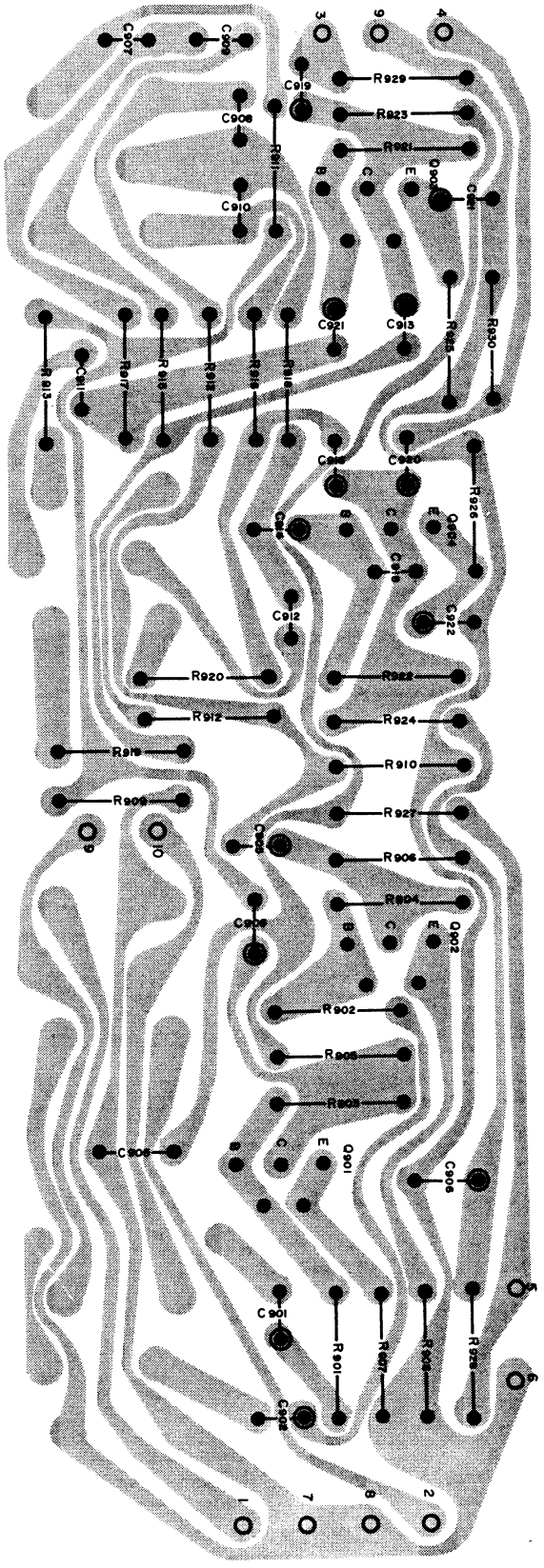
PHONO AMPLIFIER





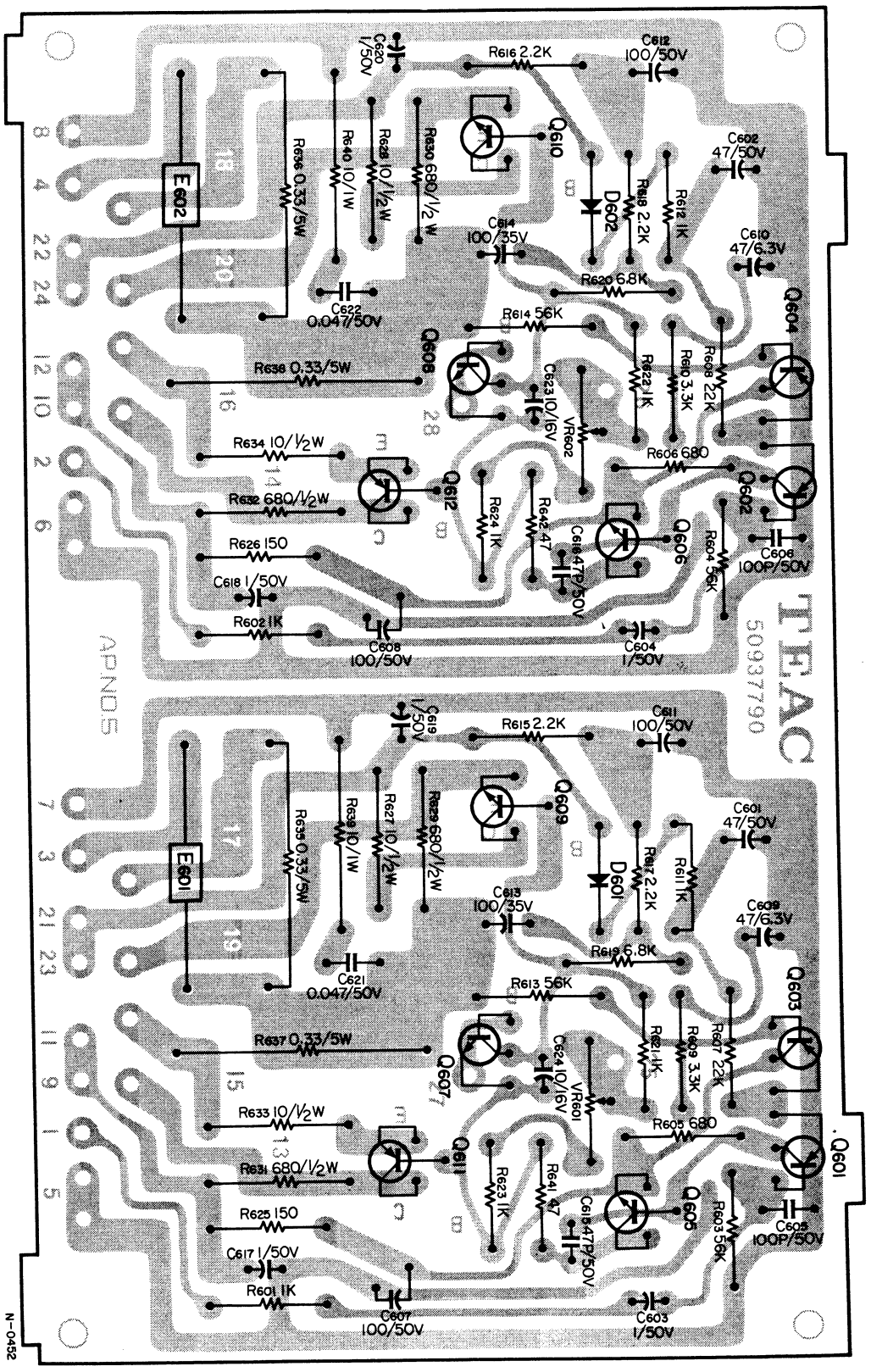
PC BOARD
AG-6500

CONTROL AMPLIFIER

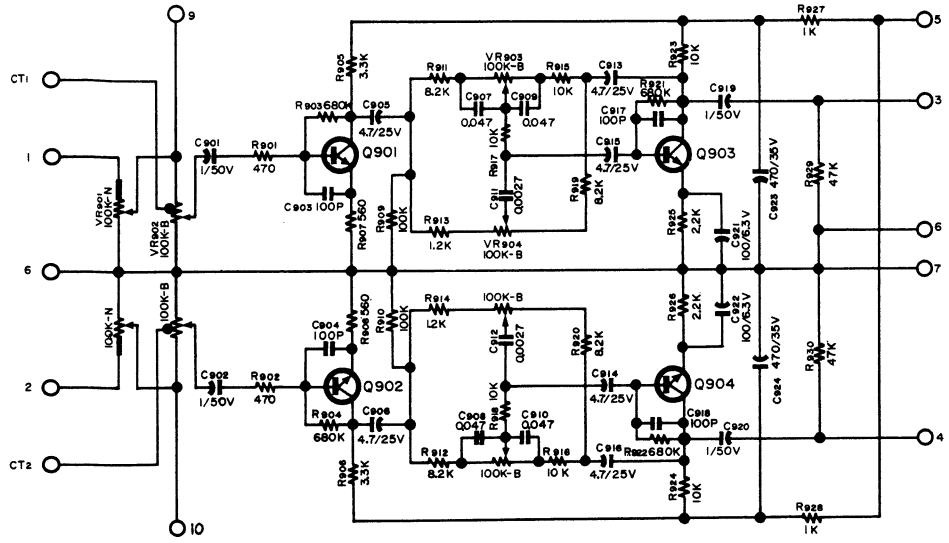


PC BOARD
AG-6500

POWER AMPLIFIER



CONTROL AMPLIFIER



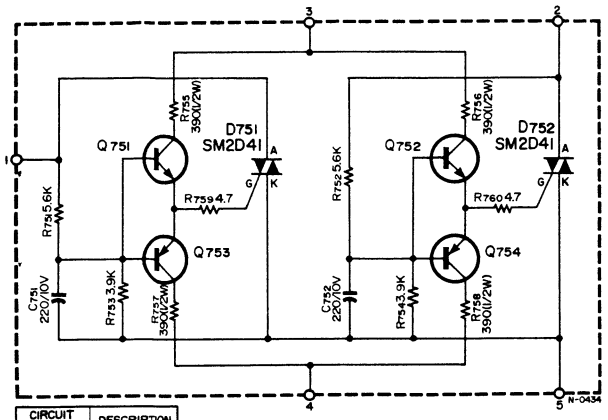
CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION
	57242990	PC Board Assy, Control Ampl.
	SILICON TRANSISTORS	
Q901/902	50424350	2SC693-FU
Q903/904	50424350	2SC693-FU
	POTENTIOMETERS	
VR901	57242590	Volume, 100kΩ B
VR902	57242600	Balance, 100kΩ MN
VR903/904	57242610	Tone Control, 100kΩ B
	CARBON RESISTORS	
R901/902	50519600	470Ω 1/4W 10%
R903/904	50519620	680kΩ 1/4W 10%
R905/906	50513960	3.3kΩ 1/4W 10%
R907/908	50513910	560Ω 1/4W 10%
R909/910	50513700	100kΩ 1/4W 10%
R911/912	50518830	8.2kΩ 1/4W 10%
R913/914	50513440	1.2kΩ 1/4W 10%
R915/916	50513570	10kΩ 1/4W 10%

CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION
R917/918	50513570	10kΩ 1/4W 10%
R919/920	50518830	8.2kΩ 1/4W 10%
R921/922	50519620	680kΩ 1/4W 10%
R923/924	50513570	10kΩ 1/4W 10%
R925/926	50513950	2.2kΩ 1/4W 10%
R927/928	50513430	1kΩ 1/4W 10%
R929/930	50513870	47kΩ 1/4W 10%
	CAPACITORS	
C901/902	50554540	Elec. 1μF 50V
C903/904	50543400	Mica 100pF 50V
C905/906	50554530	Elec. 4.7μF 25V
C907/908	50548270	Mylar 0.047μF 50V
C909/910	50548270	Mylar 0.047μF 50V
C911/912	50548570	Mylar 0.0027μF 50V
C913/914	50554530	Elec. 4.7μF 25V
C915/916	50554530	Elec. 4.7μF 25V
C917/918	50543400	Mica 100pF 50V
C919/920	50554540	Elec. 1μF 50V
C921/922	50554230	Elec. 100μF 6.3V
C923/924	50554620	Elec. 470μF 35V
	57240420	Pin, F3 Type

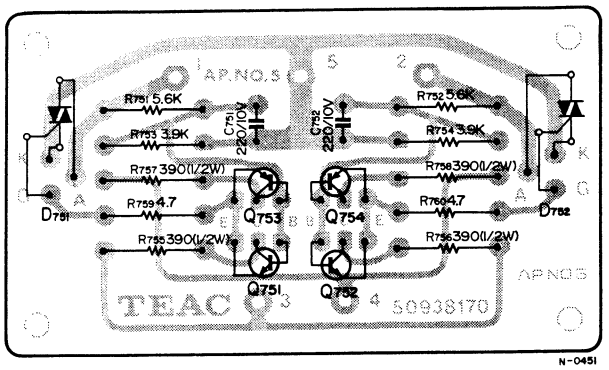
PHONO AMPLIFIER

CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION
	57242970	PC Board Assy, Phono Ampl.
		SILICON TRANSISTORS
Q501a/b	50424500	2SC871-E
Q502a/b	50424510	2SC693-FU
		CAPACITORS
C501a/b	50546291	Tantalum 3.3μF 16V
C502a/b	50554040	Elec. 10μF 25V
C503a/b	50548320	Mylar 0.001μF 50V
C504a/b	50543480	Mica 47pF 50V
C505a/b	50554230	Elec. 100μF 6.3V
C506a/b	50554040	Elec. 10μF 25V
C507a/b	50546801	Tantalum 0.47μF 50V
C508a/b	50548920	Mylar 0.0056μF 50V
C509a/b	50548430	Mylar 0.0018μF
C510a/b	50554580	Elec. 47μF 50V
		CARBON RESISTORS
R501a/b	50519190	68kΩ 1/4W 10%
R502a/b	50513430	1kΩ 1/4W 10%
R503a/b	50513710	120kΩ 1/4W 10%
R504a/b	50513920	680Ω 1/4W 10%
R505a/b	50518380	180kΩ 1/4W 10%
R506a/b	50513870	47kΩ 1/4W 10%
R507a/b	50518830	8.2kΩ 1/4W 10%
R508a/b	50513440	1.2kΩ 1/4W 10%
R509a/b	50519600	470Ω 1/4W 10%
R510a/b	50519590	1.8kΩ 1/4W 10%
R511a/b	50513950	2.2kΩ 1/4W 10%
R512a/b	50513710	120kΩ 1/4W 10%
R513a/b	50519620	680kΩ 1/4W 10%
R514a/b	50519440	39kΩ 1/4W 10%
R515a/b	50513860	27kΩ 1/4W 10%
R516a/b	50513700	100kΩ 1/4W 10%
	57240420	Pin, F3 Type

PROTECT CIRCUIT

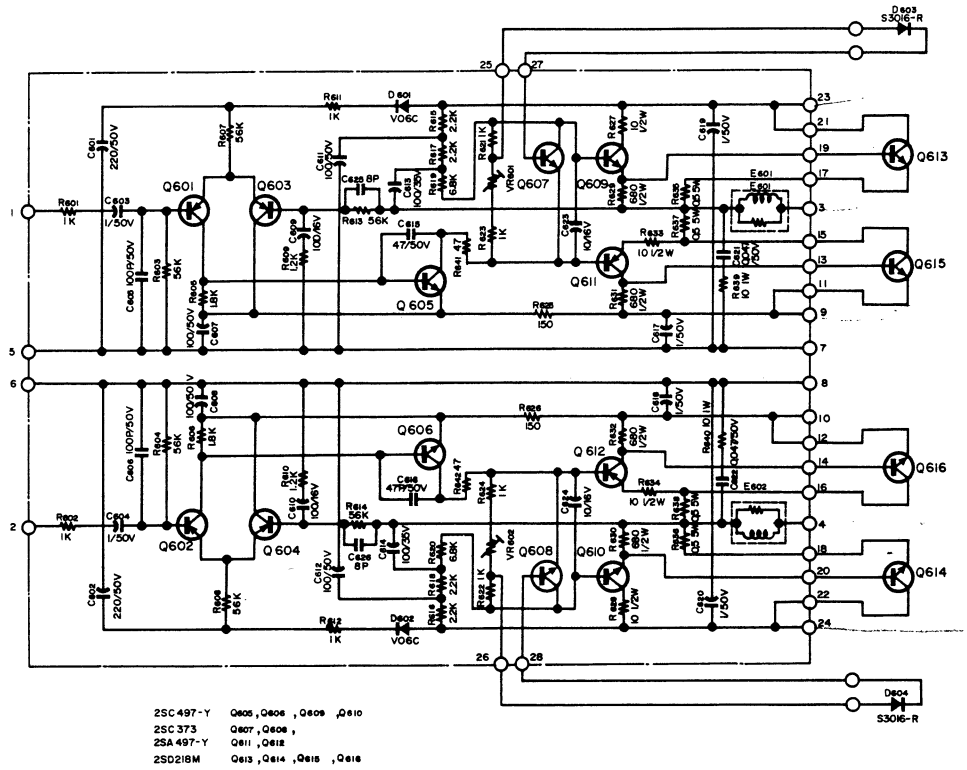


CIRCUIT REF NO.	DESCRIPTION
Q751/752	2SC734-Y
Q753/754	2SA561-Y



CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION
	50938162	PC Board Assy, Protection Circuit
		SILICON TRANSISTORS
Q751/752	50423500	2SC734-Y
Q753/754	50423531	2SA561-Y
		THYRISTOR
D751/752	50428020	Triac SM2D41
		CARBON RESISTORS
R751/752	50138800	5.6kΩ 1/4W 10%
R753/754	50513940	3.9kΩ 1/4W 10%
R755/756	50574720	390Ω 1/4W 10%
R757/758	50574720	390Ω 1/4W 10%
R759/760	50519250	4.7Ω 1/4W 10%
		BIPOLAR CAPACITORS
C751/752	50559070	220μF 10V

POWER AMPLIFIER



CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION
	57243010	Power Ampl. Assy
	57243020	PC Board Assy, Power Ampl.
		SILICON TRANSISTORS
Q601~604	50424310	2SA493 GR-20 (Red) or
	50424320	2SA493 GR-21 (Orange) or
	50424330	2SA493 GR-22 (Grean)
Q605/606	50423570	2SC497-Y
Q607/608	50423380	2SC373-Y
Q609/610	50423570	2SC497-Y
Q611/612	50423650	2SA497-Y
		SILICON DIODES
D601/602	50422430	V06C
		CARBON RESISTORS
R601/602	50513430	1kΩ 1/4W 10%
R603/604	50513990	56kΩ 1/4W 10%
R605/606	50519590	1.8kΩ 1/4W 10%
R607/608	50513990	56kΩ 1/4W 10%
R609/610	50513430	1kΩ 1/4W 10%
R611/612	50513430	1kΩ 1/4W 10%
R613/614	50513990	56kΩ 1/4W 10%
R615/616	50513950	2.2kΩ 1/4W 10%
R617/618	50513950	2.2kΩ 1/4W 10%
R619/620	50519230	6.8kΩ 1/4W 10%
R621/622	50513430	1kΩ 1/4W 10%
R623/624	50513430	1kΩ 1/4W 10%
R625/626	50513320	150Ω 1/4W 10%
R627/628	50517890	10Ω 1/2W 10%
R629/630	50574780	680Ω 1/2W 10%

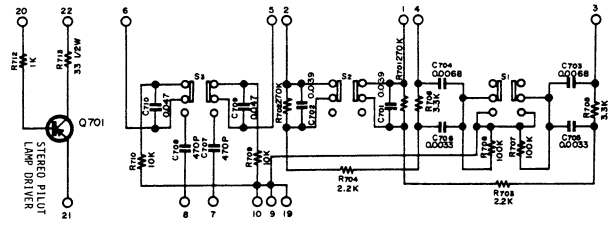
CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION
R631/632	50574780	680Ω 1/2W 10%
R633/634	50517890	10Ω 1/2W 10%
R635/636	50520040	0.5Ω 5W 10% (Cement)
R637/638	50520040	0.5Ω 5W 10% (Cement)
R639/640	50576340	10Ω 1W 10%
R641/642	50519270	47Ω 1/4W 10%
		TRIMMER RESISTORS
VR601/602	50533970	1kΩ B
		CAPACITORS
C601/602	50555610	Elec. 220μF 50V
C603/604	50554540	Elec. 1μF 50V
C605/606	50543400	Mica 100pF 50V
C607/608	50554070	Elec. 100μF 50V
C609/610	50554200	Elec. 100μF 16V
C611/612	50554070	Elec. 100μF 50V
C613/614	50554630	Elec. 100μF 35V
C615/616	50543510	Mica 33pF 50V
C617/618	50554540	Elec. 1μF 50V
C619/620	50554540	Elec. 1μF 50V
C621/622	50548270	Mylar 0.047μF 50V
C623/624	50554050	Elec. 10μF 16V
C625/626	50542240	Ceramic 8pF 50V
		MISCELLANEOUS
	50232910	Heat Sink
E601/602	50920930	Coil, Choke

OTHER ELECTRICAL COMPONENTS

CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION
		HEAT SINK ASSY
	57243410	Heat Sink Assy
	50928680	Heat Sink (C)
	50938070	Bracket, Heat Sink (L)
	50938080	Bracket, Heat Sink (R)
	50928320	Bracket, Power Ampl.
Q613∿616	50424540	Transistor, 2SD218-M
	50452550	Terminal Strip, 1L-2P
	50434720	Socket, Power Transistor
D603·604	50422440	Diode, Silicon S3016R
C001·002	50542070	Capacitor, Ceramic 0.047μF 50V
C003	50554780	Capacitor, Elec. 33μF 10V
C004	50548130	Capacitor, Mylar 0.0047μF 50V
C005·006	50549930	Capacitor, Dipped Mica 390pF 50V
C007	50548130	Capacitor, Mylar 0.0047μF 50V
C008	50551230	Capacitor, Elec. 1000μF 50V
C009·010	50551220	Capacitor, Elec. 3300μF 50V
C011·012	50542270	Capacitor, Ceramic 0.01μF 1.4kV AC
C013	50541120	Capacitor, Oil ECN-D6103
D001∿004	50422420	Diode, Silicon 1S-1072
L003	50566390	Coil, RF Inductor LTB-100μH
R001	50513960	Resistor, Carbon 3.3kΩ 1/4W
R010·011	50520310	Resistor, Cement 220Ω 5W
R012·013	50517890	Resistor, Carbon 10Ω 1/2W
R014·015	50520290	Resistor, Cement 1kΩ 5W
VR001	57242620	Potentiometer, 5kΩ (B)

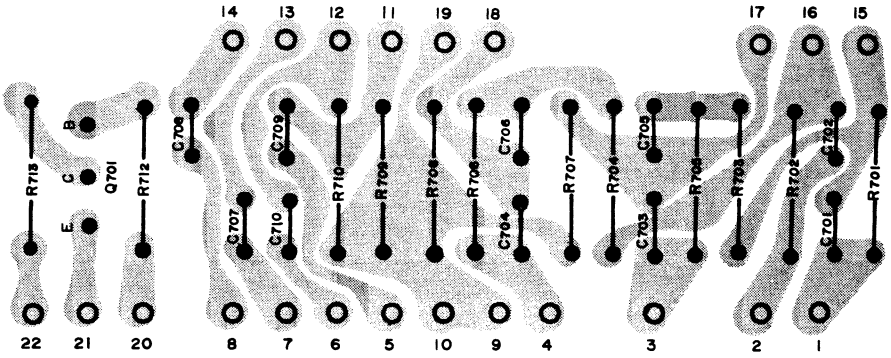
CIRCUIT PC BOARD &
PARTS LIST
AG-6500

FILTER CIRCUIT & STEREO PL DRIVER



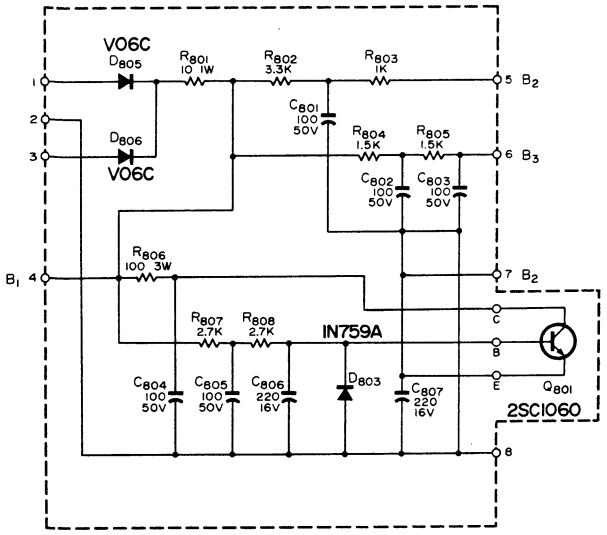
S1 HIGH CUT FILTER
S2 LOW CUT FILTER
S3 LOUDNESS

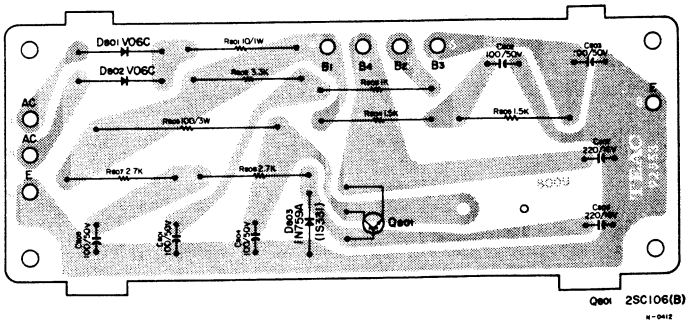
Q701 2SA683Q



CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION
	57243000	PC Board Assy
Q701	50424560	Transistor 2SA683-Q
R701/702	50513700	Resistor, Carbon 10kΩ 1/4W 10%
R703/704	50513950	Resistor, Carbon 2.2kΩ 1/4W 10%
R705/706	50513960	Resistor, Carbon 3.3kΩ 1/4W 10%
R707/708	50513700	Resistor, Carbon 100kΩ 1/4W 10%
R709/710	50513570	Resistor, Carbon 10kΩ 1/4W 10%
R712	50513430	Resistor, Carbon 1kΩ 1/4W 10%
R713	50519640	Resistor, Carbon 33Ω 1/4W 10%
C701/702	50548520	Capacitor, Mylar 0.1μF 50V
C703/704	50548570	Capacitor, Mylar 0.0068μF 50V
C705/706	50548130	Capacitor, Mylar 0.0047μF 50V
C707/708	50543530	Capacitor, Mylar 470pF 50V
C709/710	50548270	Capacitor, Mylar 0.047μF 50V
	57240420	Pin,F3 Type

POWER SUPPLY





CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION
	57243370	PC Board Assy, Power Supply
Q801	50423980	Transistor, Silicon 2SC1060-B
D805·806	50422430	Diode, V06C
D807	50422810	Diode, WZ-120
R801		Resistor, Metal Oxide Film 10Ω 1W
R802·803	50517880	Resistor, Carbon 1kΩ 1/2W 10%
R804·805	50517880	Resistor, Carbon 1kΩ 1/2W 10%
R806	50520290	Resistor, Cement 100Ω 5W
R807·808	50574920	Resistor, Carbon 2.7kΩ 1/2W 10%
C801∿805	50554070	Capacitor, Elec. 100μF 50V
C806·807	50554390	Capacitor, Elec. 220μF 16V
	50928550	Heat Sink (B)
	57240420	Pin, F3 Type

DIAL STRING